

REMARKS

Applicant responds to the Office Action of May 8, 2002, in which claims 1-59 are pending in the application. Claims 1-30 have been withdrawn from consideration. Upon entry of the foregoing amendment, claims 1-33, 35-40, 42-43 and 46-77 will be pending in the application. Applicant has submitted herewith a Letter to the Official Draftsperson and a corrected drawing showing the correction to Figure 6c.

The Examiner has restricted the claims in the present application under 35 U.S.C. §121 as follows:

Group I. Claims 1-30, drawn to method of making an adhesive article, classified in class 156, subclass 230.

Group II. Claims 31-59 drawn to an adhesive article, classified in class 428, subclass 40.1.

Applicant affirms election of Group II, claims 31-59, with traverse.

Applicant has cancelled claims 44 and 45. The application, as originally filed contained an error in the numbering of the claims such that there were no claims 44 and 45. The cancellation of claims 44 and 45 is in accordance with 37 C.F.R. §1.126.

Rejection of Claims 31-59 under 35 U.S.C. §112

Claims 31-59 have been rejected under 35 U.S.C. §112, first paragraph, as being based on a disclosure that is not enabling. The Examiner contends that a route for air bubbles to egress is critical or essential to the practice of the invention and that this feature is not incorporated into independent claim 1, and further is not enabled by the disclosure.

Applicant respectfully disagrees with the Examiner's contention. Applicant has not characterized a route for air bubbles as "critical or essential" to the adhesive article of the present invention. Rather, Applicant has described the adhesive article of the present invention as providing one or more of air egress, repositionability and slideability for easy application to a substrate. (See page 2, lines 16-17 and page 4, lines 3-5.) Furthermore, the specification contains a written description that enables the article recited in claim 31. Applicant directs the Examiner's attention, for example, to paragraph 46 on page 17

wherein one embodiment of the article of claim 31 is described.

In another embodiment, illustrated in Figure 3 , an adhesive article 30 having improved air egress, repositionability, and slideability characteristics is provided by simultaneously printing and embedding a pattern of non-adhesive areas 33 into the surface of a liner 34 which contains a moldable layer under the silicone release. A pattern (such as diamonds, small dots, or combinations thereof) is printed on the release surface of a poly-coated release liner 34 using a non-adhesive that has a greater adhesion to the subsequently applied adhesive than the release liner. The pattern may be applied to the release surface by hotmelt flexographic techniques. As the pattern is printed, the combination of heat and pressure provided by the raised portion of the flexographic printing roll and the heat from the printing ink cause the moldable layer under the silicone release layer to be depressed and the ink on the liner to be embedded. . . . The liner 34 is then coated with adhesive 32 and transferred to a facestock 31, such as cast or extruded vinyl. The release liner 34 is then removed to expose the raised non-adhesive pattern of non-adhesive material 33 on the surface of the adhesive 32, as illustrated in Figure 3b.

Therefore, the specification clearly describes the article of claim 31. Because the adhesive article recited in claims 31-59 is fully supported in the specification, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 31-59 based on 35 U.S.C. §112, first paragraph.

Rejection of Claims 31-33, 35, 37, 42, 55 and 59 under 35 U.S.C. §102(b)

Claims 31-33, 35, 37, 42, 55 and 59 have been rejected under 35 U.S.C. §102(b) as being anticipated by Rusincovitch et al. (US Pat. No. 5,675,787). The Examiner contends that Rusincovitch discloses an adhesive article comprising a release liner, a continuous layer of adhesive adhered to the release liner and a pattern of non-adhesive

material forms embedded into the release surface of the release liner. The Examiner has relied on Figure 4B of Rusincovitch as support for his position that the non-adhesive forms are embedded into the release surface.

Applicant respectfully disagrees with the Examiner's contention. Rusincovitch does not disclose, teach or suggest embedding a pattern of non-adhesive material forms in the release surface of the release liner. Rather, Rusincovitch teaches that the non-adhesive forms are printed on the surface of the release liner. (Col. 5, line 66 to col. 6 line 3; and col. 6, lines 57-59) Figure 4B of Rusincovitch shows the non-adhesive forms on the surface, and not embedded into the release liner. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 31-33, 35, 37, 42, 55 and 59 under 35 U.S.C. §102(b) based on Rusincovitch et al.

Rejection of Claims 31-33, 37, 42-43 and 55 under 35 U.S.C. §102(b)

Claims 31-33, 37, 42-43 and 55 have been rejected under 35 U.S.C. §102(b) as being anticipated by Danielson et al. (US Pat. No. 3,331,729). The Examiner contends that Danielson discloses an adhesive article comprising a release liner, a continuous layer of pressure sensitive adhesive and a pattern of non-adhesive material forms embedded into the release surface of the release liner.

Applicant has amended claim 31 to recite that the non-adhesive material forms are embedded into the release surface of the release liner so that the top surface of the non-adhesive material forms is even with or below the plane of the release surface of the release liner. Claims 32 and 55 have also been amended to clarify the position of the top surface of the non-adhesive material forms relative to the release surface of the release liner. Danielson discloses applying a sparse uniform distribution of very small hollow thin-walled fragile microballoons, preferably embedded "somewhat beyond their centers" in the adhesive layer. (Col. 2, lines 22-26.) The microballoons are coated onto a heated polyethylene film and penetrate about 1/4 to about 1/3 of their diameter into the softened polyethylene film. (Col. 2, lines 63-65.) A pressure sensitive adhesive is then applied over the partially penetrated microballoons. Danielson discloses that the microballoons become embedded to approximately an equal depth in the plastic layer (liner) and in the adhesive

layer. (Col. 5, lines 44-46.) Danielson does not disclose, teach or suggest embedding non-adhesive material forms fully into the softened film, nor does Danielson disclose, teach or suggest embedding non-adhesive forms into the softened film so that the top surface of the forms is even with or below the plane of the surface of the softened film. Accordingly, Danielson et al. does not anticipate amended claim 31, and claims 32-33, 37, 42-43 and 55, which depend from claim 31. Furthermore, it would not have been obvious to one of ordinary skill in the art to modify the adhesive article of Danielson et al. to fully embed the non-adhesive material forms because Danielson et al. clearly teaches that the microballoons are only partially embedded and are necessarily sufficiently fragile to be collapsed under application of pressure. (Col. 5, lines 60-68; col. 6, lines 1-3; col. 6, lines 54-61.) The non-adhesive material forms of Applicant's claimed invention are fully embedded into the release liner so that the top surface of the non-adhesive material forms are even with or below the plane of the release surface of the release liner. In view of the amendment to claim 31 and the foregoing remarks, Applicant respectfully requests withdrawal of the rejection of claims 31-33, 37, 42-43 and 55 under 35 U.S.C. §102(b) based on Danielson et al.

Rejection of Claims 31-32, 35, 37, 42, 54-55 and 59 under 35 U.S.C. §102(b)

Claims 31-32, 35, 37, 42, 54-55 and 59 have been rejected under 35 U.S.C. §102(b) as being anticipated by Dressler (US Pat. No. 6,083,616). The Examiner contends that Dressler discloses an adhesive article comprising a release liner, a continuous layer of a pressure sensitive adhesive and a pattern of non-adhesive material forms embedded into the release surface of the release liner, wherein the top surfaces of the non-adhesive material forms are even with or below the plane of the surface of the release liner. The Examiner has relied on Fig. 4 of Dressler.

Applicant has amended claim 31 to recite that the top surface of the non-adhesive material forms is even with or below the plane of the top release surface of the release liner. Claims 32, 54-55 and 59 have also been amended to clarify the position of the top surface of the non-adhesive material forms relative to the release surface of the release liner. The adhesive article as claimed by Applicant in claim 31 includes non-adhesive

material forms embedded entirely into the release liner. Dressler on the other hand, discloses barrier structures having top surfaces protruding from the release surface. Figure 4 of Dressler (as inverted, to correspond to the relative position of Applicant's adhesive article) does not show an adhesive article wherein the top surface of the non-adhesive material forms are even with or below the plane of the top release surface of the release liner. Accordingly, Dressler does not anticipate claims 31-32, 35, 37, 42, 54-55 and 59. Furthermore, it would not have been obvious to one of ordinary skill in the art to modify the adhesive article of Dressler to fully embed the non-adhesive material forms because Dressler clearly teaches that the barrier structures are only partially embedded and only tenuously adhere to the release sheet. (Col. 4, lines 32-35.) The non-adhesive material forms of Applicant's claimed invention are fully embedded into the release liner so that the top surface of the non-adhesive material forms are even with or below the plane of the release surface of the release liner. In view of the amendment to claim 31 and the foregoing remarks, Applicant respectfully requests withdrawal of the rejection of claims 31-32, 35, 37, 42, 54-55 and 59 under 35 U.S.C. §102(b) based on Dressler.

Rejection of Claims 36, 38-40, 46, and 50-52 under 35 U.S.C. §103 (a)

Claims 36, 38-40, 46 and 50-52 have been rejected under 35 U.S.C. §103 (a) as being unpatentable over Rusincovitch et al. The Examiner contends that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the adhesive article of Rusincovitch to include UV curable ink and coalesced ink as the non-adhesive material forms, to include a plurality of lines or grid form, and to print the ink of Rusincovitch onto a release liner having a textured surface.

Applicant respectfully submits that each of claims 36, 38-40, 46 and 50-52, which depend from claim 31, are not obvious based on the teachings of Rusincovitch. Specifically, claim 31, as amended, recites that the non-adhesive material forms are embedded into the release surface of the release liner such that the top surface of the non-adhesive material forms are even with or below the plane of the top release surface of the release liner. As shown in Figures 1b, 2b, 3a, 4b and 6b, the non-adhesive material forms are fully embedded into the release liner. There is no teaching or suggestion provided by

Rusincovitch to modify the wall covering of Rusincovitch, particularly since Rusincovitch specifically teaches that the spacers protrude from the flat surface of the release sheet. (Col. 6, lines 31-36.) Furthermore, Rusincovitch teaches that the surface of the release sheet "has no irregularities such as dimples or protrusions." (Col. 6, lines 57-61.) In view of the amendment to claim 31 and in view of the foregoing remarks, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. §103 (a) of claims 36, 38-40, 46 and 50-52.

Rejection of Claims 34 and 41 under 35 U.S.C. 103(a)

Claims 34 and 41 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Rusincovitch et al. either individually or in view of Murai et al. (U.S. Pat No. 5,853,862). In view of the cancellation of claims 34 and 41, this rejection is moot.

Rejection of Claims 39-40 under 35 U.S.C. 103(a)

Claims 39-40 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Rusincovitch et al in view of GB 1,511,060. Specifically, the Examiner contends that the grid pattern taught by GB '060 would be an obvious modification of Rusincovitch's non-adhesive spacers to successfully obtain the air egress property.

Applicant respectfully disagrees with the Examiner's contention. GB '060 teaches an article with improved degassing properties comprised of an air impermeable plastic sheet and an underlying adhesive. The shape of the adhesive on the edge that adheres to a surface consists of elongated ridges and or recessions. Degassing of the article occurs when the adhesive layer is exposed to pressure and heat so that the adhesive layer collapses on the air spaces and conforms to a surface. GB '060 does not teach or suggest that patterned shapes could be made with non-adhesive material or that non adhesive material forms would be desirable. In fact, the reference would discourage the use of non-adhesive material forms because GB '060 teaches that the patterns must collapse during the application so that the molten adhesive surface achieves a uniform thickness and smooth edge void of any preexisting pattern. Further, as discussed above, claim 31 has been amended to recite that non-adhesive material forms embedded in a release liner are even with or below the plane of the top release surface of the release liner. Rusincovitch

et al. fails to disclose, teach or suggest the adhesive article of claim 31, and the adhesive articles of claims 39 and 40 which depend from claim 31. GB '060 adds nothing to the teachings of Rusincovitch whereby material forms embedded as in claim 31 would be desirable. For these reasons, Applicant respectfully submits that the rejection of claims 39 and 40 has been overcome and respectfully requests withdrawal of the rejection.

Rejection of Claims 47-48 under 35 U.S.C. § 103(a)

Claims 47 and 48 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Rusincovitch et al. in view of Knott et al. (US Pat. No. 5,731,073). The Examiner contends that Knott et al. teach the use of a non-adhesive porous elastomer for the purpose of temporarily connecting two components, and that it would have been obvious through routine experimentation to one of ordinary skill in the art to have used a porous, non-adhesive elastomer to form non-adhesive material forms in an adhesive article for the purpose of providing temporary connection between substrates.

Applicant respectfully disagrees with the Examiner's contention. Knott et al. is directed to a porous, selectively conductive member containing an elastomer. Within the elastomer are irregular z-axis conductive pathways. The elastomer is used to temporarily electrically connect electronic components. Applicant's claimed invention has nothing to do with making electrical connections. Knott et al. is nonanalogous art. As such, the rejection of claim 47-48 based on Knott et al. is improper. Applicant respectfully request withdrawal of the rejection of claims 47-48 under 45 U.S.C. §103(a) based on Rusincovitch et al. in view of Knott et al.

Rejection of Claims 50-52 under 35 U.S.C. § 103(a)

Claims 50-52 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Rusincovitch et al. either individually, or in view of JP 59-53787. The Examiner contends that it would have been obvious through routine experimentation to have used a textured release liner for the purpose of providing clearly defined grooves on the adhesive surface allowing for the air trapped between the adhesive sheet and the substrate to be successfully egresses.

Applicant respectfully disagrees with the Examiner's contention. As discussed above, claim 31, from which claims 50-52 depend, has been amended to recite that the non-adhesive material forms are even with or below the plane of the top release surface of the release liner. This design is discouraged by Rusincovitch et al. Furthermore, Rusincovitch teaches that the surface of the release liner is flat. (Col. 3, lines 21-25, and col. 6, lines 32-34.) The release surface of Rusincovitch is not textured, and "has no irregularities such as dimples or protrusions." (Col. 6, lines 57-61.) Rusincovitch specifies a flat surface because the non-adhesive ink spacers are printed directly on the flat surface of the release liner. (Col. 11, lines 11-14.) Because Rusincovitch teaches away from the incorporation of a release liner having a non-flat, textured surface there is no motivation to combine the teaching of JP '787 with that of Rusincovitch to modify the adhesive wallcovering of Rusincovitch. Even if such modification were made, it would not result in the adhesive article as claimed by Applicant. Claims 50-52 are directed to an adhesive article in which the non-adhesive material forms are even with or below the plane of the top release surface of the release liner. The adhesive article of claims 50-52 would not have been obvious at the time of the invention based on the combination of Rusincovitch and JP '787. Accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 50-51 under 35 U.S.C. §103(a) based on Rusincovitch in view of JP 59-53787.

Rejection of Claims 56-58 under 35 U.S.C. §103(a)

Claims 56-58 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Dressler in view of Calhoun et al. (US Pat. No. 5,585,178). The Examiner contends that while Dressler et al. fail to teach a second adhesive layer adhered to the back surface of the release liner, Calhoun et al. teach a composite adhesive tape and that it would have been obvious through routine experimentation to one of ordinary skill in the art to have used multiple layers of adhesive for the purpose of providing varying properties to the adhesive article.

Applicant respectfully submits that the adhesive article of claims 56-58 is not obvious based on the teachings of Dressler, as modified by Calhoun. Specifically, as discussed above with respect to the rejection of claims 31-32, 35, 37, 42, 49, 54-55 and

59 based on Dressler, Dressler discloses barrier structures having top surfaces protruding from the release surface. Figure 4 of Dressler (as inverted, to correspond to the relative position of Applicant's adhesive article) does not show an adhesive article wherein the top surface of the non-adhesive material forms are even with or below the plane of the top release surface of the release liner. It would not have been obvious to one of ordinary skill in the art to modify the adhesive article of Dressler to fully embed the non-adhesive material forms because Dressler clearly teaches that the barrier structures are only partially embedded and only tenuously adhere to the release sheet. (Col. 4, lines 32-35.) The non-adhesive material forms of Applicant's claimed invention are fully embedded into the release liner so that the top surface of the non-adhesive material forms are even with or below the plane of the release surface of the release liner. In view of the amendment to claim 31 and the foregoing remarks, Applicant respectfully requests withdrawal of the rejection of claims 56-59 under 35 U.S.C. §103(a) based on Dressler in view of Calhoun.

New Claims 60-77

Applicant has added new claims 60-77 directed to an adhesive article having a pattern of non-adhesive material forms embedded into the release surface of the release liner and wherein the pattern of non-adhesive forms is applied by vacuum metalization or sputtering. It could not have been obvious to one of ordinary skill in the art at the time the invention was made to apply a pattern of non-adhesive material forms by vacuum metalization or sputtering based on the disclosure of Rusincovitch (U.S. 5,676,787) because Rusincovitch teaches that the non-adhesive material is limited to materials that can be used as the ink on a printing machine (Col. 10, lines 29-31). There is no teaching or suggestion in Rusincovitch to use as the non-adhesive material anything other than ink on a printing machine.

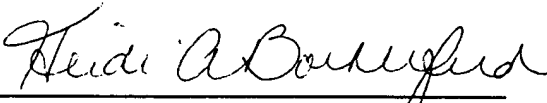
Furthermore, Murai et al., previously cited by the Examiner with regard to claims 34 and 41, teach a composite film comprising an adhesive barrier layer between a base film and a thin inorganic film for the purpose of resisting the passage of water vapor, oxygen or fragrances through food, pharmaceutical or electronics product packaging. Each layer in the article of Murai et al. is necessarily continuous. Murai et al. further teach that an inorganic layer entirely covers an anchor coat layer. The barrier composite films of Murai

et al. are non-analogous art. Applicant respectfully requests allowance of claims 60-77.

In view of the foregoing amendment and remarks, Applicant respectfully submits that the Examiner's rejections have been overcome and respectfully requests allowance of claims 31-33, 35-40, 42-43, and 46-77.

Respectfully submitted,

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APPENDIX

Following is a marked-up version of the amended claim.

31. (Amended) An adhesive article comprising:

a release liner having a top release surface and a [back] bottom surface;

a continuous layer of adhesive having a [front] bottom surface and a [back] top surface and end edges, wherein the [front] bottom surface of the adhesive is adhered to the top release surface of the release liner; and

a pattern of non-adhesive material forms embedded into the top release surface of the release liner, said non-adhesive material forms having a top surface, wherein the top surface of the non-adhesive material forms is even with or below the plane of the top release surface of the release liner.

32. (Amended) The adhesive article of claim 31 wherein a facestock is applied to the [back] top surface of the adhesive layer.

49. (Amended) The adhesive article of claim 31 wherein the top surfaces of the non-adhesive material forms are below the plane of the top release surface of the release liner.

53. (Amended) The adhesive article of claim 50 wherein the [lower] bottom surface of the adhesive layer has a textured surface that is complimentary to the textured surface of the release liner.

54. (Amended) The adhesive article of claim 31 further comprising a second release liner adhered to the [back] top surface of the adhesive.

55. (Amended) The adhesive article of claim 31 wherein the [back] bottom surface of the release liner has a release coating thereon.

56. (Amended) The adhesive article of claim 55 further comprising a second adhesive layer having a [front] top and [back] bottom surface adhered to the release liner, the [front] top surface of the second adhesive in contact with the [back] bottom surface of the release liner.

57. (Amended) The adhesive article of claim 56 further comprising a facestock adhered to the [back] top surface of [one of] the first adhesive [layers] layer or the bottom surface of the second adhesive layer.

58. (Amended) The adhesive article of claim 56 further comprising a facestock adhered to the [back] bottom surface of the second adhesive layer.

59. (Amended) An adhesive article comprising:
a release liner having a release surface and a [back] bottom surface;
a continuous layer of adhesive having a [front] bottom surface and a [back] top surface and end edges, wherein the [front] bottom surface of the adhesive is adhered to the release surface of the release liner;

a pattern of non-adhesive material forms embedded into the release surface of the release liner, wherein the top surface of the non-adhesive material forms is even with or below the plane of the release surface of the release liner; and

a facestock adhered to the [back] top surface of the adhesive layer, wherein the thickness of the non-adhesive material forms is sufficient enough to cause deformation of the facestock upon application of the adhesive article to a substrate.